

# Quotient Exponent Rule (F)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_

Simplify each expression.

1.  $\frac{3^{-8}}{3^{-7}}$

2.  $\frac{4^{-5}}{4^{-2}}$

3.  $\frac{-7^{-4}}{-7^{-3}}$

4.  $\frac{-2^{-6}}{-2^3}$

5.  $\frac{-7^5}{-7^7}$

6.  $\frac{4^{-2}}{4^6}$

7.  $\frac{-8^{-9}}{-8^{-4}}$

8.  $\frac{6^{-3}}{6^7}$

9.  $\frac{-6^4}{-6^7}$

10.  $\frac{-7^{-5}}{-7^{-4}}$

# Quotient Exponent Rule (F) Answers

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_

Simplify each expression.

1.  $\frac{3^{-8}}{3^{-7}}$

$$3^{-8-(-7)} = 3^{-1} = \frac{1}{3}$$

2.  $\frac{4^{-5}}{4^{-2}}$

$$4^{-5-(-2)} = 4^{-3} = \frac{1}{4^3}$$

3.  $\frac{-7^{-4}}{-7^{-3}}$

$$-7^{-4-(-3)} = -7^{-1} = -\frac{1}{7}$$

4.  $\frac{-2^{-6}}{-2^3}$

$$-2^{-6-3} = -2^{-9} = -\frac{1}{2^9}$$

5.  $\frac{-7^5}{-7^7}$

$$-7^{5-7} = -7^{-2} = \frac{1}{7^2}$$

6.  $\frac{4^{-2}}{4^6}$

$$4^{-2-6} = 4^{-8} = \frac{1}{4^8}$$

7.  $\frac{-8^{-9}}{-8^{-4}}$

$$-8^{-9-(-4)} = -8^{-5} = -\frac{1}{8^5}$$

8.  $\frac{6^{-3}}{6^7}$

$$6^{-3-7} = 6^{-10} = \frac{1}{6^{10}}$$

9.  $\frac{-6^4}{-6^7}$

$$-6^{4-7} = -6^{-3} = -\frac{1}{6^3}$$

10.  $\frac{-7^{-5}}{-7^{-4}}$

$$-7^{-5-(-4)} = -7^{-1} = -\frac{1}{7}$$